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## NEW VARIETIES OF *PHYSA ANCILLARIA* SAY.

BY BRYANT WALKER.

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### *Physa ancillaria* var. *magnalacustris*.

Shell subglobose, thick, solid, semi-opaque; incremental striæ fine, stronger toward the suture and somewhat irregular; transverse striæ very minute or subobsolete; purplish-horn color, darker toward the apex, which is dark brown or black; body whorl with one or more broad white varicose bands, more or less suffused with white toward the lip and at the base; whorls 5, regularly and rapidly increasing, the first minute, the last very large, regularly rounded, not shouldered, the greatest width being in the centre; spire slightly elevated, acute; suture but slightly impressed, margined below with white; aperture large, expanded below so that the greatest width is below the centre; outer lip thin, sharp, more or less expanded and broadly rounded below; thickened within by deep yellowish-brown or liver-colored callus, which appears externally as a broad white band, extremities connected by a thin callus, which is broadly reflected over the body whorl: columella white, straight, scarcely twisted.

Alt.  $12\frac{2}{3}$ , diam. 11, length of aperture  $11\frac{1}{2}$  mm.

Alt.  $17\frac{1}{2}$ , diam.  $12\frac{1}{2}$ , length of aperture,  $14\frac{1}{2}$  mm.

Alt.  $13\frac{1}{2}$ , diam.  $10\frac{1}{2}$ , length of aperture  $10\frac{1}{2}$  mm.

Types from Frankfort, Benzie County, Michigan. It has also been found at Charlevoix, Beaver Islands, Mackinac Island, Mackinaw City and Port Austin, Huron County, Michigan. These localities indicate distribution along the coast-line of the upper part of the lower

peninsula from Saginaw Bay on the Lake Huron shore to nearly as far south on the Lake Michigan coast. This form is the characteristic *Physa* of the lake shore, and is commonly found clinging to the large stones along the rocky or stony beaches. Its thick wine-colored or purplish shell with prominent white varicose bands, basally expanded aperture, and the regularly curved outline from the apex to the columella, give it an aspect peculiarly its own, and render it easily distinguishable from the typical form or any of the allied species. Specimens from the Beaver Islands, Lake Michigan and Mackinaw City on the mainland, while retaining the peculiar form, are thinner, more inclined to be horn-colored and have a narrower marginal band, which internally is red rather than brown, and in these respects seem to connect the variety with the typical form. Were it not for these intermediate examples, there would be good ground for considering the form worthy of specific rank.

*Physa ancillaria* var. *crassa*.

Shell oval or obovate, thick, solid, opaque, smooth, shining, longitudinal striæ very fine, transverse striæ minute or subobsolete; white, more or less tinged with vinous or pale purple; darker toward the apex, which is dark brown; whorls 4-5; regularly and rapidly increasing, the first minute, the last very large, roundly shouldered and frequently flattened laterally; spire short, scarcely elevated above the general contour of the shell; suture but slightly impressed, bordered below with white; aperture large, but slightly shorter than the shell; widest in the centre, somewhat narrowed below and slightly effuse at the junction of the basal lip with the columella; outer lip broadly rounded, thin, acute, thickened within by a strong callus which is yellowish-brown within and white externally; interior of body whorl light yellowish-brown or liver color; extremities of lip connected by a thin callus which is broadly reflected over the body whorl; columella strong, white, nearly straight, but slightly twisted.

Alt.  $17\frac{1}{2}$ , diam.  $12\frac{1}{2}$ , length of aperture 14 mm.

Alt. 16, diam.  $12\frac{1}{2}$ , length of aperture  $13\frac{1}{2}$  mm.

Alt. 15, diam. 11, length of aperture  $13\frac{1}{2}$  mm.

Higgins Lake, Rosecommon County, Michigan.

This form, while related to the variety *magnalacustris* in its texture, differs entirely in its shape, which is quite similar to the typical form in the roundly-shouldered body whorl, and more elongated and

less expanded aperture. The lip joins the body-whorl at a more obtuse angle and lacks the basal expansion characteristic of the lake form. The spire is also less produced. Compared with the typical form, this variety is easily distinguished by its heavy, solid, opaque shell.

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NEW PISIDIA.

BY DR. V. STERKI.

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*Pisidium tenuissimum*, n.

Rather small, little to strongly oblique, moderately to rather well inflated, with the edges usually acutish, elongated or rather short, rhomboid to oblong-ovoid in outline, hinge margin little, inferior moderately curved, posterior end rounded or subtruncate obliquely in a postero-anterior direction with a rounded angle above; anterior more or less curved, truncate obliquely with the rounded-angular end inferiorly, or the whole anterior part rather regularly parabolic, with the end in the longitudinal median line; beaks slightly posterior, somewhat broad, moderately elevated over the hinge line, somewhat mammillar; surface very finely, almost regularly striated, highly polished; color horn to smoky, or to greenish, or to light grayish; shell very thin, translucent; hinge very fine, plate very narrow, cardinal teeth very small, short, thin, scarcely or slightly curved; those of the left valve very close together, longitudinal-parallel, the upper little posterior; lateral teeth rather long, markedly straight, slender, thin, with short cusps; also the outer ones in the right valve quite distinct; ligament fine.

Long. 3.4, alt. 2.8, diam. 2.1 mill.

Habitat: Straits and Orchard lakes, in Oakland Co., Michigan,<sup>1</sup> collected by Messrs. Walker and Sargent; Pine Lake, Marquette Co., Mich. (Upper Peninsula), and other waters in the same state; also seen fossil.

As pointed out in the description, the species is very variable in shape, and extreme forms, if found separate, might well be taken for different species. The one from Pine Lake (collected by Mr. Walker) is especially notable: the beaks are narrower and more

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<sup>1</sup> Close together, but at the heads of different river systems.